LIBRARY
RECEIVED
★ SEP 18 1923 ★
U.S. Department of Agriculture

THE PLANT DISEASE REPORTER

Continuation of

THE PLANT DISEASE BULLETIN

Issued By

THE PLANT DISEASE SURVEY

Volume VII Number 7

September 15, 1923

BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

THE PLANT DISEASE REPORTER

Continuation of the Plant Disease Bulletin

Issued by

THE PLANT DISEASE SURVEY

Vol. VII September 15, 1923 Number 7

REPORTS ON BROWN SPOT (PHYSODERMA ZEAE - MAYDIS) OF CORN

South Carolina: Found in several places in Oconee county. Damage very slight. (Moore, Sept. 1)

Alabama: Abundant in some fields. Entirely absent in others nearby. Loss 2%. Stalks broken off six inches to one foot above ground, due to this trouble. (Miles, Sept. 1)

Mississippi: Date of first report June 20, Oktibbeha County. Later reports indicate that the disease is general over the state and is causing considerable damage particularly in fields where rotation has not been practiced. (Sec. of Plant Pathology, Sept. 1)

Louisiana: Common everywhere with apparently a heavier loss than usual. In some localities in North Louisiana the spots on the stems have caused a rather high percentage of the stalks to break over. (Edgerton, Sept. 1)

CORN RUST REPORTS

Alabama: Important locally, though in general does little damage. Loss 5%. (Miles, Sept. 1)

Mississippi: This disease has been reported from several counties in the state this year. In some fields of late corn it has occurred in epidemic form. Apparently some damage has been caused in the most heavily infected fields. (Sec. of Plant Pathology, Sept. 1)

Minnesota: Present in about the usual amount. Not serious anywhere. (Sec. of Plant Pathology, Sept. 1)

Iowa: On sweet corn is very severe in local fields. (Gilman, Aug. 15). More severe than last year. (Gilman, Sept. 1)

South Dakota: Prevalent, 5 to 20%, no damage. (Evans, Aug. 15)

CORN MOSAIC IN LOUISIANA

Very common with often a high percentage in the sugar cane belt. Reduces the yield to some extent but evidently does not do the damage that is reported for tropical countries. (Edgerton, Sept. 1)

THE "PASMO" DISEASE OF FLAX

Specimens of the disease of flax caused by Phlyctaena linicola Speg. recently described by Brentzel (Phytopath.13: 53, Jan. 1923), were received on August 13 of this year from L. H. Dewey, Office of Fibre Plant Investigations. The material was collected by R. L. Davis at East Lansing, Michigan on August 10.

It is hoped that anyone making collections of this apparently serious disease will report the same, with specimens, to the Plant Disease Survey.

BACTERIAL BLIGHT OF SOYBEAN

This disease has been reported from Kansas by R. P. White, and the report was accompanied by specimens from which the organism Bacterium phaseoli sojense was isolated by Miss Florence Hedges. This constitutes the first authentic report from Kansas.

DRY WEATHER HAS HELD APPLE SCAB IN CHECK THIS YEAR

A glance through the accompanying reports on apple scab indicates that the disease has not caused as much damage as usual this year, largely on account of dry weather early in the summer.

New Hampshire: Very little damage even on susceptible varieties. (Butler, Sept. 1)

Vermont: Very little except in unsprayed orchards where it is abundant. (Gilbert. Sept. 1)

Connecticut: Numerous reports, but apparently only an average season for injury on account of dry weather. (Clinton, Sept. 1)

Pennsylvania: While this disease is very general, infection as a rule has been rather light. Even check trees in various experimental blocks do not show more than 30-40% of foliage infection where for the past two or three years infection has run over 90%. Wet weather early in August has produced in some localities late infections both upon the young leaves and fruit. It seems quite probable that at harvest time we shall find more scab than was earlier indicated. (Thurston, Aug. 20)

Kentucky: In well cared for orchards the damage was not serious. In two counties a pre-pink spray was applied four days before the regular pink spray. Growers were well pleased with the results. (Magill, Sept. 1)

Alabama: Present but not important. Some defoliation in unsprayed orchards. (Miles, Sept. 1)

Arkansas: Common on unsprayed or poorly sprayed fruit and leaves. (Young, Sept. 1)

Ohio: Most serious in the southern portion of the state where weather conditions were not so favorable for the application of the pre-blossom spray as in northern Ohio. Fruit in unsprayed orchards is worthless. Secondary infections of scab are quite conspicuous in some commercial orchards. In northern Ohio excellent control was accomplished. (Thomas, Sept. 1)

Michigan: The season has been very unfavorable for scab development. First infection came May 15 and 16, and was rather light. In a few instances local showers have given a severe secondary infection on the leaves. (Bennett, July 1)

Minnesota: The heavy primary infection was followed by unfavorable weather so that no late infections occurred. Less prevalent than usual. (Sec. of Plant Pathology, Sept. 1)

Iowa: More severe than usual. Very damaging in unsprayed orchards. (Melhus, Sept. 1)

BLACK ROT OF APPLES

New Hampshire: Somewhat less prevalent than usual. (Butler, Sept. 1)

Pennsylvania: Mr. Walton reports that frog-eye leaf spot in Adams and Franklin Counties is hard to find. (Thurston, Aug. 20)

Kentucky: Ben Davis and Delicious not receiving midsummer sprays have 5 to 40% infection. (W. W. Magill, Sept. 1)

Alabama: Occasional damage. 1% loss. (Miles, Sept. 1)

Mississippi: Date of first report June 25 from Attala County. Reported July 28 from Scott County. (Sec. of Plant Pathology, Sept. 1)

Arkansas: Rather common in small amounts on fruit, especially in run-down or poorly sprayed orchards. Some reports of defoliation due to leaf infection. (Young, Sept. 1)

Ohio: Black rot is demanding its usual toll in the apple orchards of Ohio. It is very conspicuous both in sprayed and unsprayed, much less serious, however, in the former. It seems to be a very common complement following fire blight infection, especially with Jonathan and Wagner varieties. This year it seems to be less in evidence. No leaf infection followed by serious defoliation in June occurred this year. Black rot is the most serious enemy to home orchards where little attention is given to spraying. (Thomas, Sept. 1)

Michigan: This disease is causing about the usual amount of damage for the state. Cankers found in all of the older orchards are not numerous enough to cause any great amount of loss. (Bennett, July 1)

Minnesota: Disease is developing on twigs killed by fire blight. Found occasionally on leaves but not serious. Fruit in general clean. Greenings only susceptible. (Sec. of Plant Pathology, Sept. 1)

Iowa: More severe than usual. (Gilman, Sept. 1)

REPORTS OF APPLE BLOTCH

Pennsylvania: Mr. Walton reports from Adams and Franklin Counties that blotch is much less serious this year than for the past two or three years. (Thurston, Aug. 20)

Kentucky: Blotch has been 95% controlled with systematic spraying except on Ben Davis and a few other varieties when old blotch cankers are numerous. In one orchard receiving Bordeaux at two-week intervals since blooming, the Ben Davis has about 50% blotch. Most of commercial orchards in Kentucky are planted to varieties not very susceptible to blotch, so it is far less important than scab. (W. W. Magill, Sept. 1)

Alabama: Very general. The most serious trouble on apples in Alabama. Loss 10%. (Miles, Sept. 1)

Mississippi: Date of first report May 14 in Newton County where considerable damage was noted on young trees. In July a light infection was found in a nursery in Harrison County. (Sec. of Plant Pathology, Sept. 1)

Arkansas: Very prevalent (up to 90% of fruit) in unsprayed or poorly sprayed orchards. Very little in well sprayed orchards. (Young, Sept. 1)

Ohio: Confined chiefly to western and southwestern portion of state. (Thomas, Sept. 1)

Iowa: More severe than usual. (Gilman, Sept. 1)

Missouri (central portion): Despite special spraying this disease seems to have gotten away from some small apple growers and specked every apple in the orchard. Blotch is worse this year than last, due to frequent rains of spring and summer with much heat and humidity. (A. C. Burrill, Aug. 1)

APPLE BITTER ROT

Kentucky: Ben Davis and Delicious not receiving sprays in late summer have from 5 to 40% infection from bitter rot. It is not considered a serious orchard disease in Kentucky. (W. W. Magill, Sept. 1)

Alabama: Very little observed or reported. (Miles, Sept. 1)

Mississippi: Reported June 6 from Kemper County. Report indicated that considerable rotting occurred in this orchard. No other report. (Sec. of Plant Pathology, Sept. 1)

Arkansas: Of 123 orchards inspected 67 were reported to have bitter rot - generally in small amounts, about 4 1/2%. Not serious in well sprayed orchards. (Young, Sept. 1).

APPLE RUST REPORTS

Connecticut: At least average amount. (Clinton, Sept. 1)

Pennsylvania: Very few reports this year, but the rust can be found locally throughout central and southeastern Pennsylvania. The damage in most cases appears negligible. (Thurston, Aug. 1)

Kentucky: Disease is not common this year. Only an occasional affected tree seen. First infection noted was later than usual. (Magill & Valleau, Sept. 1)

South Carolina: Have received one or two specimens with leaves heavily infected. Fairly common, I think, but not severe in most places. (Ludwig, July 15)

Alabama: Trace present. Not serious. (Miles, Sept. 1)

Mississippi: On June 24 a heavy infection was found in Panola County. No other reports. (Sec. of Plant Pathology, Sept. 1)

Arkansas: Present throughout the apple growing section. Considerable decrease noted where cedar eradication is progressing. (Young, Sept. 1)

Minnesota: Heavy infection on leaves but rare on fruit. Wealthy and Crabs very susceptible. Greenings fairly resistant. More prevalent than usual. (Sec. of Plant Pathology, Sept. 1)

Iowa: More severe than last year. (Melhus, Sept. 1)

GRAPE DISEASES REPORTED FROM SOUTH CAROLINA

Anthracnose (Gloeosporium ampelophagum):

General throughout the state. Several severe outbreaks have been found in the Piedmont district. (Moore, Sept. 1)

Black rot (Guignardia bidwellii):

Has been unusually severe this season due to continual heavy rains.

The loss has been as high as 100% on unsprayed vines. On vines sprayed with a 4-4-50 Bordeaux, using a casein spreader, a 90% control was obtained. (Moore, Sept. 1)

BLACK PIT OF PECAN SERIOUS IN SOUTH CAROLINA

Specimens of pecan affected with black pit (non-parasitic) have been received by the Plant Disease Survey and the Office of Fruit Disease Investigations from W. D. Moore, Clemson College, South Carolina. Regarding the severity of the trouble Moore writes on September 10:

> "This trouble is causing a very serious loss to the pecan orchards throughout the state this year. Numbers of farmers have reported that practically the whole crop has been lost, due to this trouble."

SPECIMEN OF BACTERIAL SPOT OF TOMATO RECEIVED FROM INDIANA

On August 25 a green tomato fruit affected with the bacterial spot caused by Bacterium vesicatorium Doidge, was received from M. W. Gardner of Indiana. This specimen was collected by J. B. Kendrick at Indianapolis, August 21. Regarding the disease, Gardner states:

> "The disease seems to be much more prevalent this year than in the preceding two years because of the fact that many more southern grown plants were used in Indiana this year than ever before."

This bacterial spot is known to occur on tomatoes in a number of states but this is the only report that the Plant Disease Survey has had this season. In case collaborators, or others, have observed this disease, the facts should be reported, with specimens, to the Plant Disease Survey.

BEAN ANTHRACNOSE

West Virginia: Only one specimen seen so far this season. Not injurious as yet. (Giddings, Aug. 15)

Virginia: General and quite severe towards latter part of summer. About equally prevalent with bacterial blight. (Fromme, August 15)

Minnesota: Moderately abundant as indicated by infection on beans in local market. (Sec. of Plant Pathology, Aug. 1)

Ohio: Very serious in some sections. This disease is causing more loss this year than has been noted for the past three years. (Thomas, Aug. 15)

BACTERIAL BLIGHT OF BEANS

Massachusetts: Severe in many gardens. (Osmun, July 15)

West Virginia: Found in two gardens locally. (Giddings, Aug. 15)

Virginia: General and quite severe. (Fromme, Aug. 15)

South Carolina: Observed locally. (Ludwig, July 1)

Ohio: Several reports have come to our attention, yet not as serious as anthracnose. (Thomas, Aug. 15)

Illinois: Slight leaf infection has been seen near Decatur and Oakley in Macon County. (Tehon, Aug. 15)

Minnesota: Very abundant throughout state, much more so than usual. Occurs on both the pods and leaves. (Sec. of Plant Pathology, Aug. 1)

BEAN ROOT ROTS

Root rots of bean associated with Fusarium have been reported from Virginia, Minnesota and Texas. In the former state it is very destructive in certain fields of Bird Eye, grown for dry beans in Grayson and Carroll Counties, according to Fromme. Six percent death of seedlings was noted in one field.

BEAN MOSAIC

New York: Late plantings of string beans are now showing a high percentage of mosaic. (Clayton, Aug. 23)

Virginia: Quite prevalent at Blacksburg and found to some extent wherever beans were seen. Apparently on the increase. (Fromme, Aug. 15)

Wisconsin: Traces only. (Vaughan, July 15)

Minnesota: Very abundant - about the same amount as last year. (Sec. of Plant Pathology, Aug. 1)

COTTON WILT (FUSARIUM) DESTRUCTIVE

North Carolina: Specimens of cotton wilt have been received at intervals since the latter part of June. The first date of known occurrence was June 20. Wilt has been reported from a dozen or more counties in the eastern half of the state.

South Carolina: Found locally throughout the state. Resistant varieties of seed are being used generally and no serious trouble has developed from this disease. (Moore, Sept. 1)

Alabama: General all over state. One field seen where loss was 75%, nearby fields about 40%. This was on introduced seed grown side by side with locally produced seed, which latter showed not more than 3 or 4% loss. Locally grown seed not supposed to be wilt resistant. General loss 3%. (Miles, Sept. 1)

Mississippi: Date of first report June 28 from Oktibbeha County. Later reports indicate that the disease is general over the state and is causing considerable damage in certain fields where rotation has not been practiced. (Sec. of Plant Pathology, Sept. 1)

Louisiana: More complaints than usual but the damage is not heavy except in a few localities. (Edgerton, Sept. 1)

Arkansas: Prevalent over state, especially on light soils. Infection of 10% of plants common. Numerous fields show 20-30% and over 40% has been observed. (Young, Sept. 1)

MISSISSIPPI AND LOUISIANA REPORT DAMAGE FROM COTTON ANTHRACNOSE

South Carolina: Not important this season. Only one report made from eastern section of state. (Moore, Sept. 1)

Alabama: Common, but not important generally. Severe however, in a few localities. Loss 1%. (Miles, Sept. 1)

Mississippi: Date of first report April 30 from Washington County, where the stand was badly injured by this disease. Later reports have indicated that this disease is serious and general throughout the state. The excessive rainfall this season has resulted in very serious injury due to this disease.

Louisiana: More damage than usual on account of the very wet season. (Edgerton, Sept. 1)

NEW STATES REPORT POTATO DISEASES

As will be seen from the following reports the yellow dwarf of potato described by Barrus and Chupp (Phytopath. 12: 123-132. March 1922) has now been reported from Florida and Verticillium wilt of potato is recorded for Connecticut.

Connecticut: Caused about 10% premature death of Spaulding Rose vines in one field, and these infected vines bore less than half a crop. First report of this trouble in state. (Clinton, Sept. 1)

Florida: A single field of Spaulding Rose No. 4 potatoes in the vicinity of Hastings, Florida was found in which several plants showing symptoms of yellow dwarf were located. This is the only field in Florida in which the disease has been discovered. Weber, Sept. 8)

ANOTHER STATE REPORTS SPINDLE TUBER OF POTATO

Vermont: Spindle tuber, Both vine and tuber symptoms observed and studied during the season indicate the occurrence of this disease in several strains. The amount is uncertain because diagnosis has in many cases been uncertain. Sufficient correlation, however, between vine and tuber symptoms has been observed to indicate rather strongly that we have the disease present in some of our fields. (A. H. Gilbert, Sept. 1)

REPORTS OF LATE BLIGHT OF POTATO

Through an error (Plant Disease Reporter 7: 61, August 15, 1923) late blight of potato was reported as occurring on Long Island, New York. E. E. Clayton writes that he has observed no late blight on the Island this year. However, from Wyoming County, N. Y., there now comes an authentic report of slight occurrence of this disease, and on September 13 a specimen was received by the Survey from N. J. Giddings of West Virginia.

MOSAIC AND LEAFROLL OF POTATO

Vermont: Mosaic. Mosaic has been considerably less serious this season, due in part to the suppression of the usual symptoms on account of dry weather and in part to the general distribution of disease-free strains.

Leafroll. Leafroll has been reduced in amount in certified fields by rogueing and by discrimination in the selection of seed stocks. In all uninspected fields where ordinary stock has been planted, unquestionably these diseases are more prevalent than ever before.

In connection with our estimate of the prevalence and seriousness of mosaic and leafroll this year, it should be stated that aphid infestations have been much lighter than usual. This seems to have been true throughout the season. (A. H. Gilbert, Aug. 1)

Connecticut: Leaf roll. A number of reports but not more than an average season for injury. (Clinton, Sept. 1)

Mosaic. Apparently less than average. (Clinton, Sept. 1)

New York: Leaf roll. Leaf roll was serious in a good many fields of early potatoes. The seed from certain sources was heavily infected. (Clayton, Aug. 23)

Mosaic. Mosaic was not noticed in large amount. (Clayton, Aug. 23)

Kentucky: Rugose mosaic. Forty to sixty percent occurrence in common stock in Louisville district. Looks now as though common stock will make about 1/2 crop as compared with certified (local) because of mosaic, spindle sprout, spindle tuber, low vigor, etc. Rugose mosaic in certified stock 3-5%. (Gardner, Sept. 1)

Mottled mosaic. Ten to thirty percent in ordinary stock of Bull Moose and Cobbler. About 40% of acreage in Jefferson County planted to such stock. In certified Irish Cobbler (local) 1%. (Gardner, Sept. 1)

Michigan: Mosaic, cause unknown. Percentage high in fields from common stock. One to two percent found in field planted from 1922 certified Rurals. Twenty percent found in field of Green Mountain planted from stock from which 16% mosaic was rogued in 1922. Symptoms were more apparent in July than August. Masking probably due to continued drought.

Leaf roll, cause unknown. Percentage high in fields of common stock 12-15%. One small planting 80% leaf roll dwarf. One to two percent found in fields from certified stock. (J. E. Kotila, Aug. 1)

Minnesota: Mosaic Occurrence varied from 1-100% on leaves of Triumph potatoes. Other varieties only a trace. (Sec. Pl. Path. Aug. 1)

Iowa: Mosaic. Very common on Bliss Triumph and Green Mountain. Less common on Rurals and Early Ohios. (Melhus, Sept. 1)

A FEW CUCUMBER MOSAIC REPORTS

New York: The cucumber mosaic has wiped out the pickle crop which would have been short in any case, owing to the dry weather. Pokeweeds affected by mosaic are common but milkweed, while common, shows no mosaic. No relationship has ever been observed between the development of mosaic and the location of diseased perennial weeds. (Clayton, Aug. 23)

Delaware: Found at Seaford 7-26-23. Does not appear to be as prevalent as mosaic on cantaloupe. (Adams, Aug. 8)

Illinois: In Macon County a one-half acre showed 30% of the vines infected. In the truck region in Union County a one-acre field of Klondike showed between 50 and 75% infestation. A one-half acre of Moore's Imported Long Green showed serious loss in places. (Tehon, Sept. 1)

Louisiana: Present but no serious complaints. (Edgerton, July 15)

KENTUCKY REPORTS ANGULAR LEAFSPOT OF TOBACCO

Kentucky: This disease was present in over 90% of the plant beds examined last spring and is present in over 90% of the fields examined in both the Burley and dark tobacco sections. The observations have been extensive. The evidence, indicating that tobacco of the previous year's crop chewed up and spit into the plant beds during weeding, etc., is the chief cause of plant bed infection is becoming more and more convincing. We obtained complete control of this disease in 127 of 130 lots of seed, collected from various parts of the State, by seed treatment and other sanitary precautions. The 3 cases of infection were attributed to spitting at weeding time.

In dark tobacco the plants are resistant to this disease until a period just previous to the time when a leaf, if folded and pressed will crack open. From that time on they are very susceptible. Tobacco on heavily manured spots in the field may show no disease while the surrounding plants are being destroyed. This appears to be the result of a difference in maturity. (Valleau and Kinney, Sept. 1)

TOBACCO WILDFIRE LESS SERIOUS THIS YEAR

Massachusetts: There has been little evidence of this disease in tobacco fields, except in a few incidences, owing to general drought conditions. In one small area where there have been frequent local showers, 50% of the plants in one field are severely diseased. (Osmun, July 15)

Connecticut: A number of complaints in seed beds but apparently considerably less injury in the fields than in 1922 on account of dry summer. (Clinton, Sept. 1)

New York: On August 27th I examined five fields of tobacco in the neighborhood of Big Flats. The weather has been very dry most of the season and wildfire has not become very severe in the fields examined. The following counts were made at the farm of Mr. D. D. Bennett, 33 to 98% plants affected slight to moderate; Mr. Rob. Curren, 2% slightly affected; Maynard Smith, 10 to 50% slight to moderate; Bank Goss, 2 to 10% slight; W. E. Farr, 6 to 18% very slight. (Thomas, Aug. 27)

Pennsylvania: Wildfire has appeared again this season in Lancaster County. Early seed bed infections were noted May 25, after that the spread of the disease being checked by dry weather. Recent rains have caused reappearance of the disease in several instances. (Thurston, Aug. 1)

Kentucky: Only about 10 authentic cases of wildfire have been reported this year. Where present it is quite destructive. In several cases investigated this disease has remained on the same farm since 1920 when it was supposed to have first appeared. On one farm attempts to control the disease were carried on for 2 seasons. The infection each year could readily be traced to chewing diseased tobacco of the previous year's crop and spitting it into the beds. (Valleau, Sept. 1)

North Carolina: Was collected from two counties of the tobacco section during the growing season of that crop. The disease has been very light. No complaints were heard at all during the season. (G. W. Fant, Aug. 25)

South Carolina: Wildfire apparently not very serious this year. Reports from Sumter County and Georgetown County. (Ludwig, Aug. 1)

Illinois: In view of the present widespread distribution of tobacco "Wildfire" I have been interested in examining tobacco in Illinois. On July 20 I spent a day in the eastern part of Jo Daviess County, which is the only place in Illinois where tobacco is known to be grown commercially.

The plants seen on that day were from six to twelve inches high and healthy in every way. No spotting was evident on the leaves and there was no history of loss in the seedling beds. It seems apparent that "wildfire" has not yet invaded Illinois. (Tehon, July 23)

REPORTS ON TOBACCO ROOT ROTS FROM KENTUCKY

Under date of September 1, W. D. Valleau of Kentucky reports as follows on the Thielavia root rot and an undetermined root rot of tobacco:

"Thielavia basicola is quite common and destructive in the Burley section again this year. Although the disease is usually considered a cool weather disease, there are some fields where the plants have not yet begun growth although still alive. Extensive tests of our resistant strains (about 2000 tests in all) have been conducted this season with very promising results. Extensive tests of the dark tobacco varieties of western Kentucky have been made in diseased soil this year at the Experiment Station. In general, they show a slightly higher degree of resistance than the Burley varieties, but there is still much to be desired." (Valleau, Sept. 1)

"A root-rot of tobacco which differs from black-root has caused considerable injury in both the Burley and dark tobacco sections of Kentucky this year. The root systems look much like those of plants affected with black-root; i.e., many roots near the surface and all rotted off below, but the rotten roots remain white or are slightly pink. A serious phase of this disease is that it has been seen in lands where no tobacco was ever known to have been before. Some strains of tobacco that are resistant to the black-root have not proved resistant to this disease." (Valleau, Sept. 1)

Library,
U. S. Department of Agriculture,
Washington, D. C.